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EXAMINER

DOAN, KIET M

ART UNIT PAPER NUMBER

2683

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/606,428

**Applicant(s)**

PETRUS, PAUL

**Examiner**

Kiet Doan

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. **Claim 6** rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language.

Consider **claim 6**,

lines 5, 11, 14 the paragraph of claim that begin with " if the load" statement and thus are interpreters as alternative. It is unclear as to whether the compare steps on lines, 7-10 are part of the first if statement or separate step within claim.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 5, 7, 9, 10, 11, 15, 19, 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneyama et al. (Patent No. 6,757,550) in view of Adachi (Pub. No. 2001/0022806).

Consider **claim 1**, Yoneyama teaches a method for selecting a base station comprising receiving transmissions from a plurality of base stations (Col 3, lines 6-12

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teach select base station and signal transmitted) from deriving indications of received signal strength for each of the transmissions (Col 5, lines 30-37 teach signal strength each transmission). Yoneyama fail to teach deriving from the transmissions load information associated with each of the plurality of base stations and selecting one of the plurality of base stations as a current base station based on the indications of received signal strength and the load information.

In the same field endeavor, Adachi teach "Base Station Apparatus For Communication...". Further, Adachi teach deriving from the transmissions load information associated with each of the plurality of base stations (Page 3, Paragraphs 27 teach load condition such as load information within plurality of base station) and selecting one of the plurality of base stations as a current base station based on the indications of received signal strength and the load information (Page 3, paragraphs 29 teach establish/select one of the plurality base station with probe signal and load state/information).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicants invention to included, within Yoneyama system, base station apparatus for communication, as taught by Adachi to modify the system that would provided for the users better communication and cost function by select the base station.

Consider claims **5 and 15**, Adachi teaches the method further comprising: eliminating a first candidate base station among a plurality of candidate base stations if

the load information associated with the first candidate base station indicates the load of the first candidate base station exceeds a threshold (Page 11, Paragraphs 153, 154, Fig 8, teach select candidate base station with load information associated).

Consider **claim 7**, Yoneyama teaches the method wherein the first threshold is equal to two (2) (Col 6, lines 59-67, Col 7, lines 1-2 teach threshold values falls within range).

Consider **claims 9 and 19**, Yoneyama teaches the method wherein deriving received signal strength information associated with transmission from each of the plurality of base stations comprise computing a cost function based on the received signal strength of base station pairs of the plurality of base stations and a hysteresis factor (Col 5, lines 32-37, Col 6, lines 61-62, Col 7, lines 38-55 teach each base station exchange signal and calculate received signal strength and uninterrupted communication which would be hysteresis factor).

Consider **claims 10 and 20**, Yoneyama teaches the method wherein the hysteresis factor is adaptively determined based on standard deviation of the received strength for each base station pair (Col 7, lines 38-55 teach received signal strength and reissues the link channel to keep uninterrupted communication which would be hysteresis factor).

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Consider **claim 11**, Yoneyama teaches A machine-readable medium having stored thereon a set of machine-executable instructions that, when executed by a data-processing system, cause the system to perform a method for selecting a base station comprising (Col 8, lines 13-18 teach control unit which would be a machine-readable) receiving transmissions from a plurality of base stations (Col 3, lines 6-12 teach received transmit from plurality of base station) deriving indications of received signal strength for each of the transmissions (Col 4, lines 17-21 teach measure electric field strength which would be indicated received signal strength)

Adachi teaches deriving from the transmissions load information associated with each of the plurality of base stations (Page 3, Paragraphs 27 teach load condition such as load information within plurality of base station) and selecting one of the plurality of base stations as a current base station based on the indications of received signal strength and the load information (Page 3, paragraphs 29 teach establish which would be select one of the plurality base station with probe signal and load state/information).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. **Claim 2-3, 12-13** rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneyama et al. (Patent No. 6,757,550) in view of Nagato et al. (Pub. No. 2002/0177444).

Consider **claims 2 and 12**, Yoneyama teach the invention but fail to teach the method where in selecting the current base station further comprises deriving from the transmissions distance information associated with each of the plurality of base stations. In an analogous art, Nagato teach "Radio Communication System For Reducing Interferences With Respect To Other Communication System Using Close Frequency". Further, Nagato teach the method where in selecting the current base station further comprises deriving from the transmissions distance information associated with each of the plurality of base stations (Page 5, Paragraph 63, lines 1-5 teach distance information associated with base station).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicants invention to included, within Yoneyama system, radio communication system, as taught by Nagato to modify the system that provided to the users a better communication and reduce interferences.

Consider **claims 3 and 13**, Nagato further teach the method wherein deriving distance information comprises computing distance based on a reference time of transmission indicated in each of the transmissions and a received time of each of the transmissions (Page 6, Paragraph 74 and 76, Page 3, Paragraph 39 lines 5-8 teach computing distance and uses TDMA which would be reference time).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 4, 6, 14, 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneyama et al. (Patent No. 6,757,550) in view of Adachi (Pub. No. 2001/0022806) and further in view of Nagato et al. (Pub. No. 2002/0177444).

Consider **claims 4 and 14**, Yoneyama teach the method wherein selecting the current base station comprises comparing the received strength information (Col 9, lines 56-60 teach compare the receive signal strength).

Adachi teaches the load information (Page 3, paragraphs 27 teach load-condition which would be load information) and

Nagato teaches the distance information of the current base station with a set of one or more candidate base stations (Page 5, Paragraph 71, lines 7-10 teach compare distance with each base station).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicants invention to included, within Yoneyama and Adachi system, radio communication system, as taught by Nagato to modify the system that provided to the users a better communication and reduce cost function by selecting base station.



Consider **claims 6 and 16**, Yoneyama teach the method wherein selecting the current base station comprises ordering a set of candidate base stations in accordance with descending indications of received signal strength eliminating a first candidate base station among the set of candidate base stations (Col 7, lines 17-20 teach select base station in according with descending received signal strength).

Adachi teaches if the load information associated with the first candidate base station indicates the load of the first candidate base station exceeds a threshold (Page 3, Paragraphs 27) comparing load information between a likely selected base station and the remaining set of candidate base stations (Page 11, paragraphs 151, 152, 153, 154 teach load state setting selection which would be load information within select base station)

Nagato teaches comparing distance information between the likely selected base station and the remaining set of candidate base stations (Page 1, Paragraph 15, page 5, Paragraph 71 teach compare distance information within candidate base station).

The last paragraphs of this claim that begin with "if the load" statement are interpreter as alternative, therefore, examiner select first part of claim limitation to reject.

if the load of and distance to the likely selected base station does not exceed the load of and distance to each of the remaining set of candidate base stations by a first threshold, selecting the likely selected base station; and

if the load of and distance to the likely selected base station exceeds the load of and distance to alternative base station of the remaining set of candidate base stations by the first threshold, and a handover cost function (C) associated with the alternative

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base station exceeds the handover cost function ( $C_i$ ) associated with the likely selected base station by a second threshold, then selecting the alternative base station.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 8, 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneyama et al. (Patent No. 6,757,550) in view of Adachi (Pub. No. 2001/0022806) in view of Nagato et al. (Pub. No. 2002/0177444) and further in view of Kalhan et al. (Pub. No. 2004/0116133).

Consider **claims 8 and 18**, Yoneyama, Adachi and Nagato fails to teach the method wherein the second threshold is equal to 3dB. In an analogous art, Kalhan teach "System And Method For Determining When To Exit An Existing Wireless Communication Coverage Network". Further, Kalhan teach the method wherein the second threshold is equal to 3dB (Page 7, Paragraph 78 teach the second threshold is 3dB).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicants invention to included, within Yoneyama , Adachi and Nagato system, Determining when to exit an existing wireless communication coverage Network , as

taught by Kalhanto modify the system that provided to the users a better communication by selecting base station.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

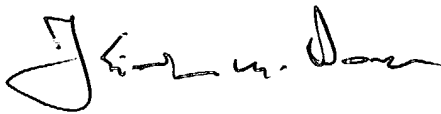
- |                  |                       |
|------------------|-----------------------|
| 1. Chunn et al.  | Patent No. 6,560,057  |
| 2. Kawano        | Patent No. 5,067,171  |
| 3. Sakoda et al. | Patent No. 6,441,662  |
| 4. Binzel        | Pub. No. 2004/0033804 |
| 5. deTobal       | Pub. No. 2004/0058678 |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiet Doan whose telephone number is 703-305-4749. The examiner can normally be reached on 8am - 5pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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